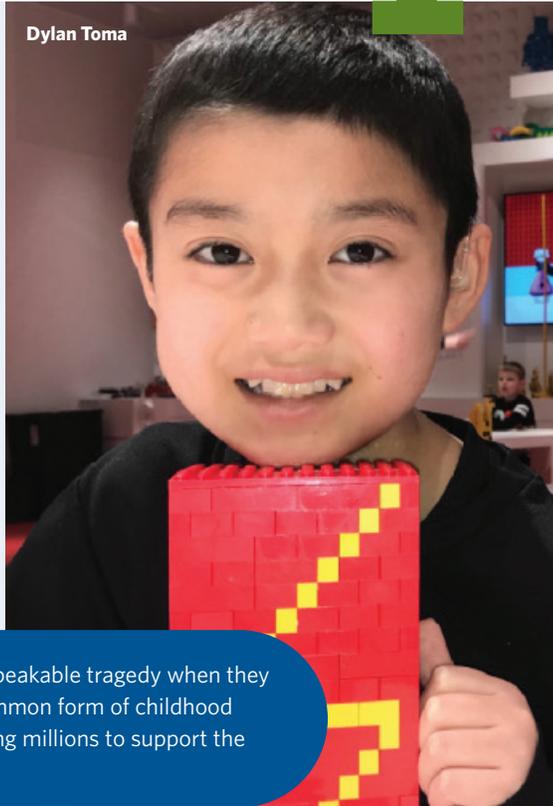


Impact

Charlotte Murdoff



Dylan Toma



Tyler Yamagishi



Three California moms faced unspeakable tragedy when they each lost a child to osteosarcoma, the most common form of childhood bone cancer. Today, they're fighting back—raising millions to support the researchers leading the charge for a cure.

Moms on a Mission

When Charlotte Murdoff, Dylan Toma, and Tyler Yamagishi were each diagnosed with bone cancer, their families faced the same startling realization: The treatment regimen for pediatric osteosarcoma hasn't changed in 40 years. Just as disheartening, there are no proven treatments if a child relapses.

All three families hail from Hillsborough, Calif., a tight-knit community in Silicon Valley shaken to the core by childhood cancer. The first to be diagnosed, Tyler lost his battle with osteosarcoma in 2015, while Charlotte and Dylan passed away within months of each other in 2021. Since then, a fourth child in the community has been diagnosed.

The three moms—Alli Murdoff, Christina Ip-Toma, and Jennie Yamagishi—were determined to change the odds. Four years ago, working with St. Baldrick's, they banded together to form a group called Battle Osteosarcoma to support pediatric cancer research. Initially, they set a \$100,000 goal. Less than two years later, they had raised \$1.43 million, fully funding an ambitious four-year research plan led by Alejandro Sweet-Cordero, MD (see page 2). Christina recalls, "At first, it was a way for us to lean into each other and take back some control; when you're going through cancer treatment, you're always on the defensive. Never in our wildest dreams did we think it would grow this way."

Continued on page 3

In just four years, Battle Osteosarcoma has made a big impact:

2019

\$100,000

initial fundraising goal

2021

\$1.43 million

first research grant awarded

2023

\$1.5 million

second research grant to be awarded

Cracking the Code

Alejandro Sweet-Cordero, MD, is leading the charge to develop targeted treatments for osteosarcoma. Learn why he calls this “the most hopeful moment of my career.”



Alejandro Sweet-Cordero, MD

For scientists battling childhood cancer, osteosarcoma is a formidable opponent. “It’s one of the most complicated tumors because the genetics are very different from one patient to another,” explains Alejandro Sweet-Cordero, MD. “No two patients are alike. It’s a significant challenge to try to identify the best therapies for each patient.” As a result, treatments—many of which have life-threatening side effects—haven’t changed much in 40 years. Up to 50 percent of kids relapse, and if the cancer spreads, there are no proven treatments.

Dr. Sweet-Cordero is determined to change those grim statistics. Thanks to \$1.43 million in support from Battle Osteosarcoma through St. Baldrick’s, his lab at the University of California San Francisco (UCSF) is racing to crack the genetic code that differentiates individual tumors and develop targeted treatments to save kids’ lives.

The Science

The Sweet-Cordero Lab is investigating the genetic mutations that drive metastatic disease. Historically, osteosarcoma research has proceeded at a snail’s pace. The precision needed to pinpoint genetic variations of individual tumors is painstaking. Recent advances in technology and Battle Osteosarcoma’s pledge to fully fund this important research have combined to accelerate the pace.

In just two years, scientists in Dr. Sweet-Cordero’s lab have significantly increased the number of new cell lines developed

and sequenced. More cell lines and better research models have translated into testing hundreds of new potential drug combinations, including five promising treatments that have advanced to the next stage. Dr. Sweet-Cordero says, “Battle Osteosarcoma’s support has been transformative for my lab. It has allowed us to focus on research to develop new therapies that we have not considered previously. I firmly believe it will make a huge difference for children and young adults dealing with this illness by helping us move faster to find a cure.”

An important part of the initiative is collaboration with top research facilities and scientists around the globe. In partnership with the Dana-Farber Cancer Institute, Dr. Sweet-Cordero’s lab has opened the first multi-site clinical trial to bring promising lab results to humans quickly—compressing a decade-long timeline into just a few years. The Sweet-Cordero Lab is also tapping some of the world’s finest minds in cancer research, sharing newly-developed models and cell lines with scientists across the United States, Sweden, Austria, and Australia.

Dr. Sweet-Cordero is excited about his work’s potential: “I’ve been a pediatric oncologist for over 20 years, and I can say with certainty that this is the most hopeful moment in my career. Hopefully, it’s also a transformative moment for our patients. Precision oncology approaches are really going to drive the way we treat our patients in the future.”

The Human Touch

For Dr. Sweet-Cordero, the battle against osteosarcoma goes way beyond the science—it’s personal. Every line of osteosarcoma cells developed and sequenced for testing represents a child, many of whom have lost their battle. Some of their photos hang on the walls as a reminder of the urgency in his lab’s work. One of those children is Charlotte Murdoff, who passed away in 2021. In addition to providing expert medical care, Dr. Sweet-Cordero was a rock of support for Charlotte and her family through some very difficult times. Charlotte would often text the pediatric oncologist after hours. No matter the time, he always replied, sometimes with funny emojis to help calm his teenage patient.

Charlotte’s mother, Alli Murdoff, says, “Dr. Sweet-Cordero and Charlotte had a very special doctor-patient relationship. I felt that he was really looking out for her. When Charlotte first relapsed, he made a promise to her that he would never give up. Today, he’s making good on that promise. Charlotte’s memory helps provide inspiration to Dr. Sweet-Cordero’s lab as they continue to fight this disease and give hope to families battling osteosarcoma.”

Thanks to Battle Osteosarcoma, here’s what Dr. Sweet-Cordero’s lab has accomplished:

10

new osteosarcoma cell lines sequenced

25

new research models developed

700

new drug combinations tested

5

promising therapies advanced to next-stage testing

10+

partnerships formed with research labs around the world

Legacy of Life

Meet Charlotte, Dylan, and Tyler, the children whose incredible strength inspired a community to fight back against osteosarcoma.



Charlotte Murdoff's personality could light up a room. "Charlotte was beautiful on the inside and out," Alli Murdoff says. "She could simultaneously make you laugh and melt your heart." Athletic, creative, and fiercely competitive, Charlotte wanted to someday become a nurse. Charlotte founded 'That's Sew Char' to sew custom sweatshirts and donated the funds she raised to Battle Osteosarcoma. Today,

Alli says, "Charlotte is still present in the hearts and minds of many, and she continues to make an impact on others."

Dylan Toma was an energetic kid who loved soccer, LEGOs®, and superheroes—especially Flash and Iron Man. "He was spunky and could hold his own against his two older brothers," recalls Christina Ip-Toma.

"Beneath that funny and goofy exterior, he was a thoughtful guy who could get along with lots of people." Since Dylan loved video games, one Battle Osteosarcoma fundraiser was a Fortnite competition. Dylan passed away in March 2021. Christina says, "He'd be super impressed with what we've accomplished."



Tyler Yamagishi had an infectious sense of humor. Jennie Yamagishi says, "Tyler was hysterical and loved a good party with lots of food. He loved his family, his dogs, basketball, and his buddies. He also enjoyed the outdoors, especially fishing and hiking." Tyler passed away in December 2015, and today, his basketball club hosts a tournament in his memory. Of the fundraising efforts in her son's honor, Jennie adds, "Tyler would be proud of the work we've done and the money that has been raised."



Moms on a Mission (continued)

While the trio drove the effort, community volunteers stepped up to help, organizing fundraisers and marshaling corporate contributions. Alli says, "So many amazing people have supported us. It has been like a snowball—it's grown and gained momentum by leaps and bounds, and in ways we never could have imagined. The outcome means more research, which moves us closer to helping more children with osteosarcoma."

Christina says the three moms found inspiration in the experiences of Michael Egge, whose daughter, Olivia, battled osteosarcoma. Several years ago, Egge and others formed a nonprofit to jumpstart research into relapsed osteosarcoma. Egge and the new Osteosarcoma Collaborative partnered with the St. Baldrick's Foundation, which provides a scientific screening process to identify the best research proposals. Christina explains, "Alone, each of us didn't have the resources to make a difference or do the kind of rigorous scientific research that was needed." By partnering with St. Baldrick's and like-minded donors, she says, we can "move the ball up the field."

As a direct result of the first Battle Osteosarcoma grant, Dr. Sweet-Cordero's lab has tested over 700 new drug combinations to treat osteosarcoma, and five have advanced for further study. The grant also opened doors for the lab to connect with scientists around the world and receive additional funding from other sources, magnifying the power of Battle Osteosarcoma's support.

Jennie is encouraged by Battle Osteosarcoma's impact: "The results in Dr. Sweet-Cordero's lab have helped osteosarcoma research gain momentum. An increased awareness brings more funding, more research, and more solutions. Together, we are moving the field of pediatric cancer research forward."



Partner With Us!

The recipient of a new Fight Osteosarcoma Together Super Grant will be announced soon. The grant is made possible through a partnership between St. Baldrick's and five funding partners: Battle Osteosarcoma, the Zach Sobiech Osteosarcoma Fund of the Children's Cancer Research Fund, CureSearch for Children's Cancer, the Osteosarcoma Collaborative, and the Michael Egge family. This \$1.5 million, three-year grant will be administered by St. Baldrick's on behalf of the partnership.

Interested in teaming up with St. Baldrick's to support a specific type of research? Please contact Becky Chapman Weaver, Chief Mission Officer, to explore possibilities. Email becky@stbaldricks.org or call 626.792.8247, ext. 212.

Corporate Partner Spotlight

Catching a Cure

A group of corporate partners teamed up in April to host St. Baldrick's annual Catch a Million to Conquer Kids' Cancer, a seven-day marathon challenging streamers to find Pokémon while raising money to fund pediatric cancer research. Lead corporate sponsors Logitech and Sport Clips—as well as several gaming and technology brands—supported the creation of a Twitch and YouTube app to track Pokémon and provide event updates.

Competitors caught 54,578 Pokémon, raising \$26,530 to help find a cure. Thank you to all who supported this event!



Challenge Accepted

Richie Whitt, co-CEO of MarTel Corporation, hadn't grown his hair out since college. But after his colleague, Regional President Steve Girard, challenged him to wait to cut his hair until he retired, Whitt found himself with a whole lot of hair. Whitt fired back his own challenge and announced that they would be shaving their heads together for St. Baldrick's and raising money for childhood cancer research. So far, they've raised over \$350,000!

Your Gift—Magnified

The St. Baldrick's Foundation offers two great ways to fight childhood cancer—and they won't cost you anything today:

Matching Gifts—Many companies have matching gift programs that will match your gift to St. Baldrick's. The impact is tremendous: Through matching gifts, St. Baldrick's has received over \$6.5 million in additional funding for pediatric cancer research. For more information, go to <https://www.stbaldricks.org/matching-gifts>

Legacy Giving—Establishing an estate gift to St. Baldrick's is simple, thanks to our partnership with Freewill, an online source for writing your will at no cost. Simply follow the steps, designating the St. Baldrick's Foundation as the beneficiary of your legacy gift. Learn more at <https://www.freewill.com/stbaldricks>

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Thank you!

Thank you for supporting lifesaving childhood cancer research. Through your gifts, you are helping the St. Baldrick's Foundation fund the best childhood cancer research, no matter where it's being done. With \$326 million in grants funded since 2005, we are the largest non-government funder of pediatric cancer research grants. YOU made progress possible!

Ways to Give

Kids with cancer need cures now, and it starts with you. Donate to fund the most promising childhood cancer research. Give once or monthly. Start today: stbaldricks.org/ways-to-give



Scan here to help find a cure!

The St. Baldrick's Foundation is a volunteer and donor powered charity committed to supporting the most promising research to find cures for childhood cancers and give survivors long and healthy lives.